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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/933,822 09/19/97 BOWERS

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EXAMINER

IM52/0409

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ART UNIT

PAPER NUMBER

1733

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04/09/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/933,822

Applicant(s)
Bowers

Examiner
Sam Chuan Yao

Group Art Unit
1733



☒ Responsive to communication(s) filed on Sep 19, 1997

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-16 and 18-21 is/are pending in the application.

Of the above, claim(s) 1-15, 19, and 20 is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 16, 18, and 21 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 16, 18, and 21 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3 of copending Application No. 09/143,583 in view of Stahlecker et al (US 4,495,758) for reasons of record set forth in Paper No. 11 numbered paragraph 2.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

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such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 16, 18, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lofquist (US 5,478,624) in view of Stahlecker et al (US 4,495,758) and Scott (US 4,668,552).

With respect to claims 16 and 21, Lofquist discloses a process of making synthetic yarn having a heat-activated binder fiber, the process comprises:

- a) providing a bulk continuous filament base fiber,
- b) blending the bulk base fiber with heat-activated binder fibers “via conventional means such as commingling” (emphasis added) to form a blended yarn, the heat-activated binder fibers have a melting range of 165-190°C;
- c) twist-setting at least two blended yarns to form a plied yarn using a Suessen or Superba processes and the plied yarn comprises about 1-12% weight of binder fibers;
- d) heating the plied yarn to melt the binder fibers; and then
- e) cooling the heated yarn to harden the binder fibers (col. 1 line 62 to col. 2 line 22; col. 3 line 15 to col. 4 line 29; col. 7 line 35 to col. 8 line 17).

Lofquist does not expressly teach using either a ring spinning or wrap spinning technique in forming the blended yarn. However, absent any showing of unexpected benefit/result, it would have been obvious in the art making the synthetic yarn of Lofquist to wrap spin the base fibers and the binder fibers together to form a blended yarn because: a) it is conventional in the art to make

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yarns by either ring spinning method or wrap spinning method; b) it is well known in the art of making yarn to form a blended binder/base yarn using a wrap spinning method as disclosed for example by Stahlecker et al (col. 1 lines 9-40; abstract); c) it is also old in the carpet making art to uniformly spirally wrapped a binder strand around a base strand to form a tufting yarn as taught for example by Scott (col. 6 lines 52-68; figures 3-5 and 8); and, d) it is well within the purview of choice in the art to choose on whether to form yarns using an illustrative method suggested by Lofquist or other conventional yarn making methods such as a wrap spinning technique, only the expected result of effectively forming a blended yarn having base fibers and binder fibers would have been achieved in using any one of the well known methods.

Though not expressly disclosed, it would appear that in a process of making blended yarns using a wrap spinning technique would naturally form a blended yarn where a binder fiber material is uniformly wrapped around the base fibers, because of the similarity of the manufacturing processes. In any event, it would have been in the art making the yarn of Lofquist because Lofquist is drawn to making blended yarn for carpet and is not restrictive to a particular way of blending binder fibers and base fibers (col. 1 lines 11-22; col. 3 lines 37-59); and, because Scott, drawn to making a carpet, discloses the desirability of uniformly spirally wrapping binder fibers around a core strand and heat-melting the binder fibers in forming tufting yarns (figures 3-5 and 8).

With respect to claim 18, since Lofquist teaches using a yarn from a base fiber prior to commingling it with binder fibers (col. 3 lines 37-41); and since it is conventional in the art to

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form yarns by spinning a fiber bundle; this claim would have been obvious in the art making the synthetic yarn of Lofquist.

5. Claims 16, 18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stahlecker et al (US 4,495,758) taken with Lofquist (US 5,478,624) and Scott (US 4,668,552).

Stahlecker et al discloses a process of making blended wrapped yarns, the process comprises wrap spinning a binder strand and a yarn sliver together to spirally wrap the binder strand around the yarn sliver (col. 1 lines 9-40; abstract). Though not expressly disclosed, it is taken that the binder strand taught by Stahlecker et al and the binder strand of related arts disclosed in the background of the invention are heat-activated adhesive. In any event, such would have been obvious in the art as such is well known in the art as exemplified in the teachings of Scott (col. 2 lines 60-65; col. 6 lines 52-68; figures 3-4 and 8-9) and Lofquist (abstract). Note: Scott discloses the advantage of enhancing "the integrity of the fabric" in using heat-activated binder fibers in forming a blended wrap yarn (col. 2 lines 60-65). Moreover, it is also taken that the blended yarn of Stachlecker and the yarn of related art comprises binder strand which is wrapped uniformly around the yarn sliver because of the similarity of the manufacturing processes and because Stahlecker et al expressly discloses "a binder strand which is spirally wrapped about the core strand." (abstract). In any event, such would have been obvious in the art because Scott teaches the desirability of uniformly and spirally wrapping binder strand around a base yarn as shown in figures 3-6.

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The process of Stahlecker and the related art are silent on the composition of the binder relative to the yarn sliver. However, such would have been obvious in the art because Lofquist discloses the desirability of blending 1-12 weight per cent of binder strand to a base yarn to form a carpet yarn (col. 2 lines 28-58); because Scott discloses spirally wrapping about 3-10 weight per cent (based on the total weight of the yarn) of binder strand around a base strand (claims 2 and 6); and, because one in the art would have determined a workable composition of a blended yarn for the desired end-use of the article. As for the steps of heating to melt the binder around the yarn and cooling to harden the binder, such would have been obvious in the art as such is conventional in the art as taught by Scott and Lofquist.

With respect to claims 18 and 21, see column 3 line 38 to col. 4 line 42 of Lofquist. One in the art would appreciate the advantage of enhancing the integrity and transportability in spinning the yarn sliver prior to the blending process.

6. Claim 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scott (US 4,668,552) in view of Stahlecker et al (US 4,495,758).

Scott, drawn to making tufting carpet yarns, substantially discloses the process of making the blended yarn recited in claim 16 (claims 2 and 6; figures 3-4 and 8-9). Scott is silent on a method on how to spirally/helically wrapping the binder strand (12) around the base strand (11). In particular, Scott is silent on using a wrapping spinning technique to helically/spirally wrap binder strand around the base strand. However, it would have been obvious in the art to wrap spin

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the base strand and the binder strand to helically/spirally wrap the binder strand around the base strand as such is a well known effective technique in the art as exemplified in the teachings of Stahlecker et al (col. 1 lines 9-40; abstract).

With respect to claim 18, one in the art would appreciate the advantage of enhancing the integrity and transportability in spinning the yarn sliver prior to the blending process.

Response to Arguments

7. Applicant's arguments filed on 02-22-01 have been fully considered but they are not persuasive.

In response to Applicant's arguments on page 5 regarding the formation of a commingled yarn, it is submitted that the commingling process disclosed by Lofquist in forming a blended yarn is NOT critical to the invention of Lofquist. Note for instance, the passage in column 3 lines 37-41, "*The binder fiber can also be continuous filament and blended with bulk continuous filament base fiber (BSF) via conventional means such as commingling*" (emphasis added). One in the art reading this passage would have readily recognized and appreciated other well known methods of forming yarns can also be used. An effective alternative method to the commingling process in forming a blended yarn would be a conventional yarn making technique in the art better known as a wrap spinning method.

In response to Applicant's argument on the bottom of page 5, contrary to Applicant's assertion, both patents (the Stahlecker et al and Scott et al patents) cited on page 3 in the

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specification disclose a blended yarn with a "spirally wrapped binder strand" around a base strand, where the binder strand contains heat-activated adhesive material. It is acknowledged that these two patents do not explicitly state that the binder strand contains heat-activated material and expressly teach melting the binder strand. However, binder fibers, absent any express teaching that they are NOT heat-activated binders, are well understood and appreciated in the art to contain heat-activated adhesive. In any event, the Scott '552 patent, clearly teaches spirally-wrapping a heat-activated binder fibers around a base strand in forming a blended tufting yarn, and then heat-melting the binder fibers (col. 4 lines 56-65; col. 6 line 52 to col. 7 line 2).

Conclusion

8. In light of the new grounds of rejections, the prosecution of the application is **REOPENED**, and the Examiner's action is made **NON-FINAL**.


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Sam Chuan Yao** whose telephone number is **(703) 308-4788**. The examiner can normally be reached on Monday-Thursday from 8:00 AM-5:30 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mike Ball, can be reached on (703) 308-2058. The **fax number** in Group Art Unit 1733 for any official papers (i.e. papers that

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will be entered as part of the file wrapper) is (703) 305-7718 and for unofficial papers (e.g. proposed amendments) is (703) 305-7115.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0651.


Sam Chuan Yao
Primary Examiner
Art Unit 1733

scy
April 9, 2001